

FIG. 1

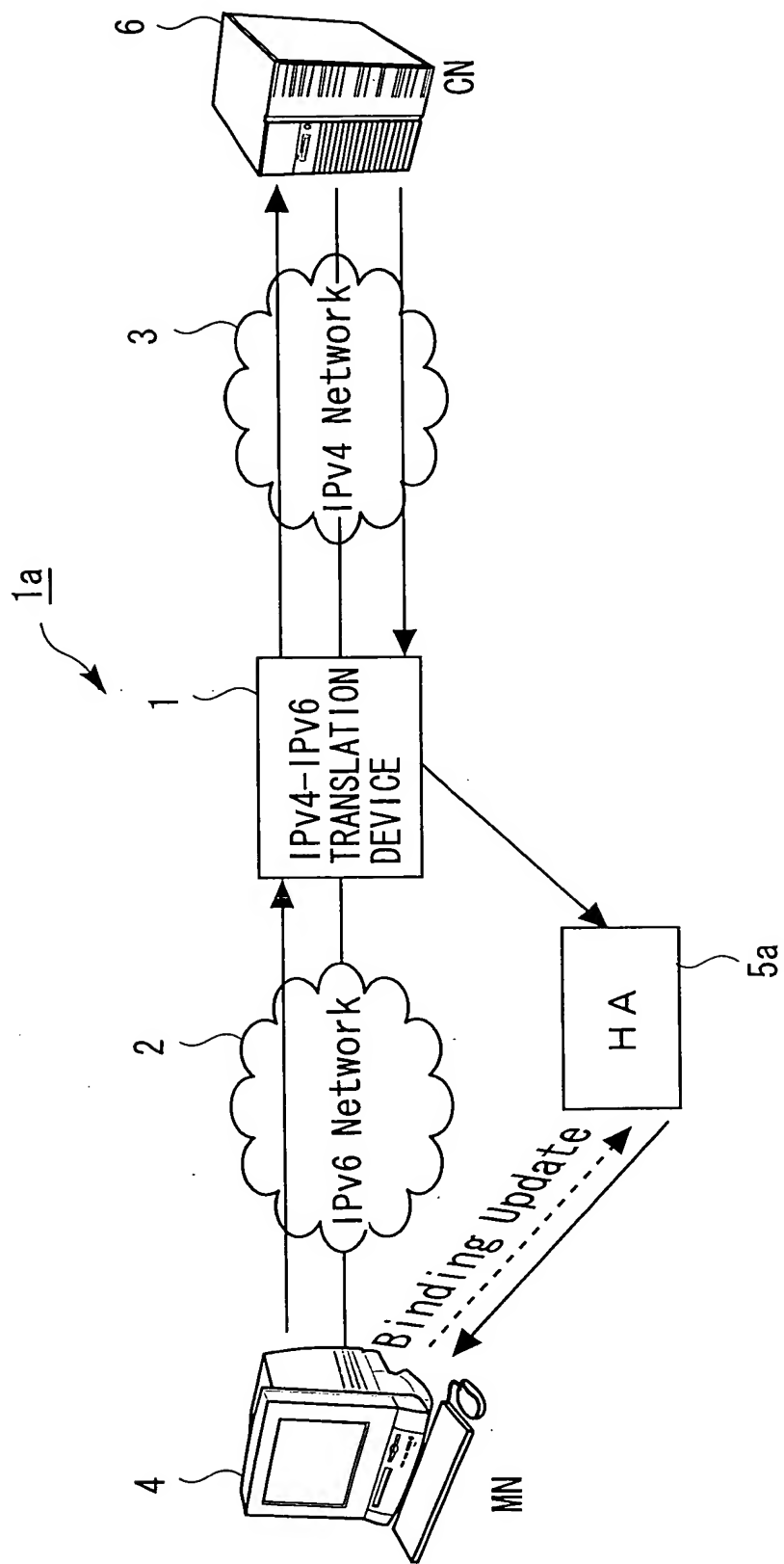


FIG. 2

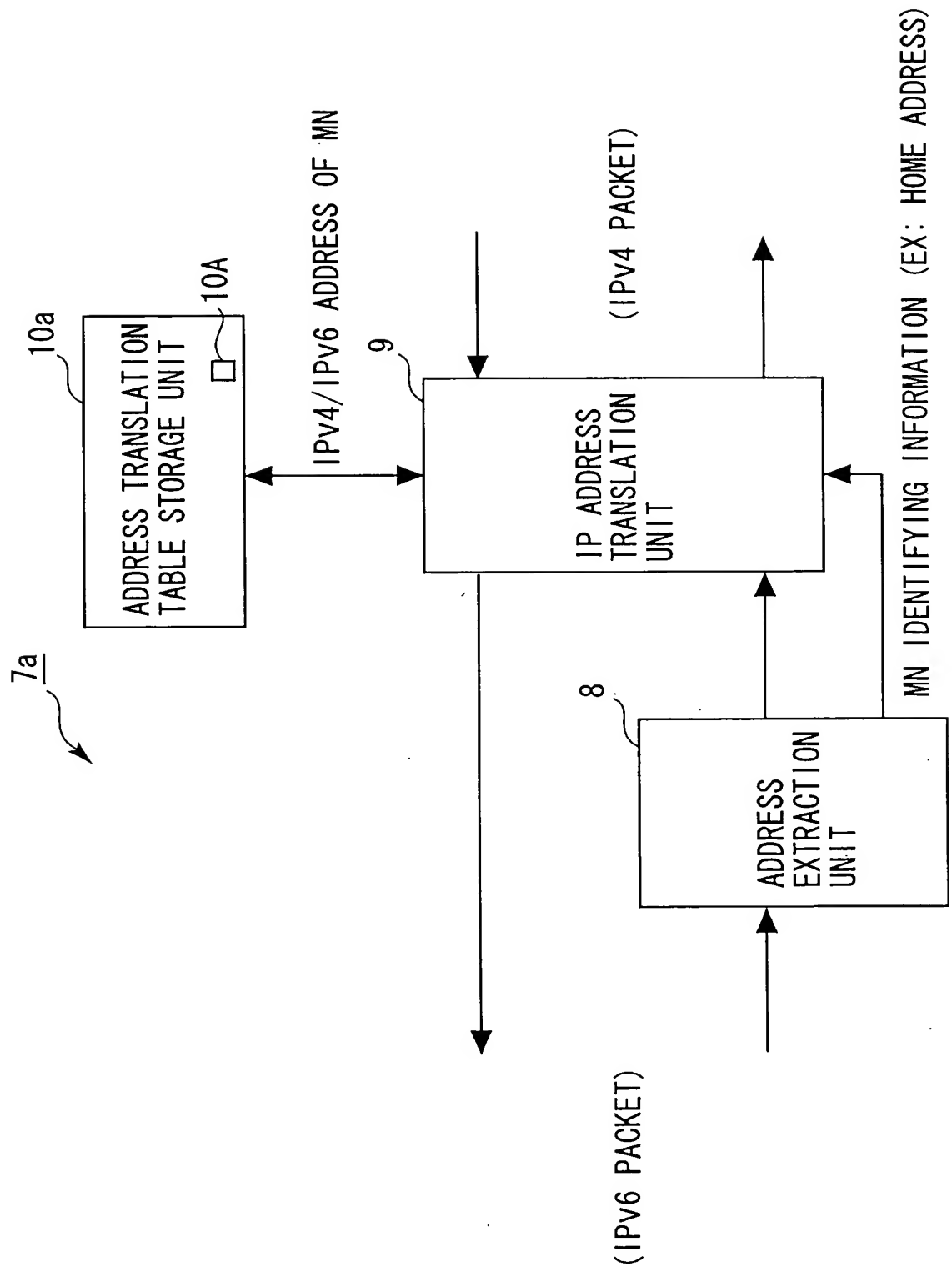


FIG. 3

10A

IPv4	IPv6
120. 130. 26. 1	FEDC:BA98::7654:3210
120. 130. 26. 2	(unassigned)
120. 130. 26. 3	(unassigned)
⋮	⋮

FIG. 4

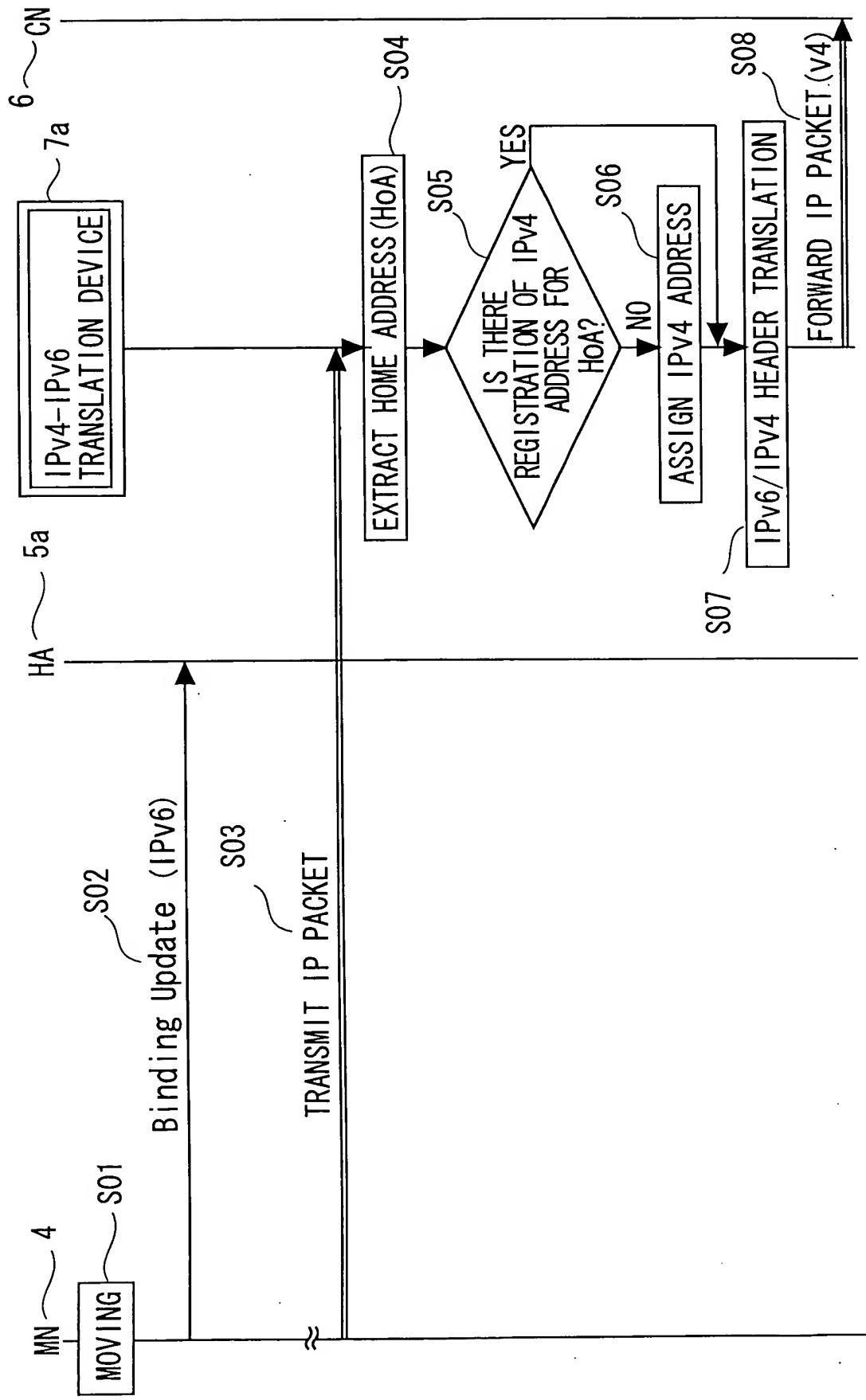


FIG. 5

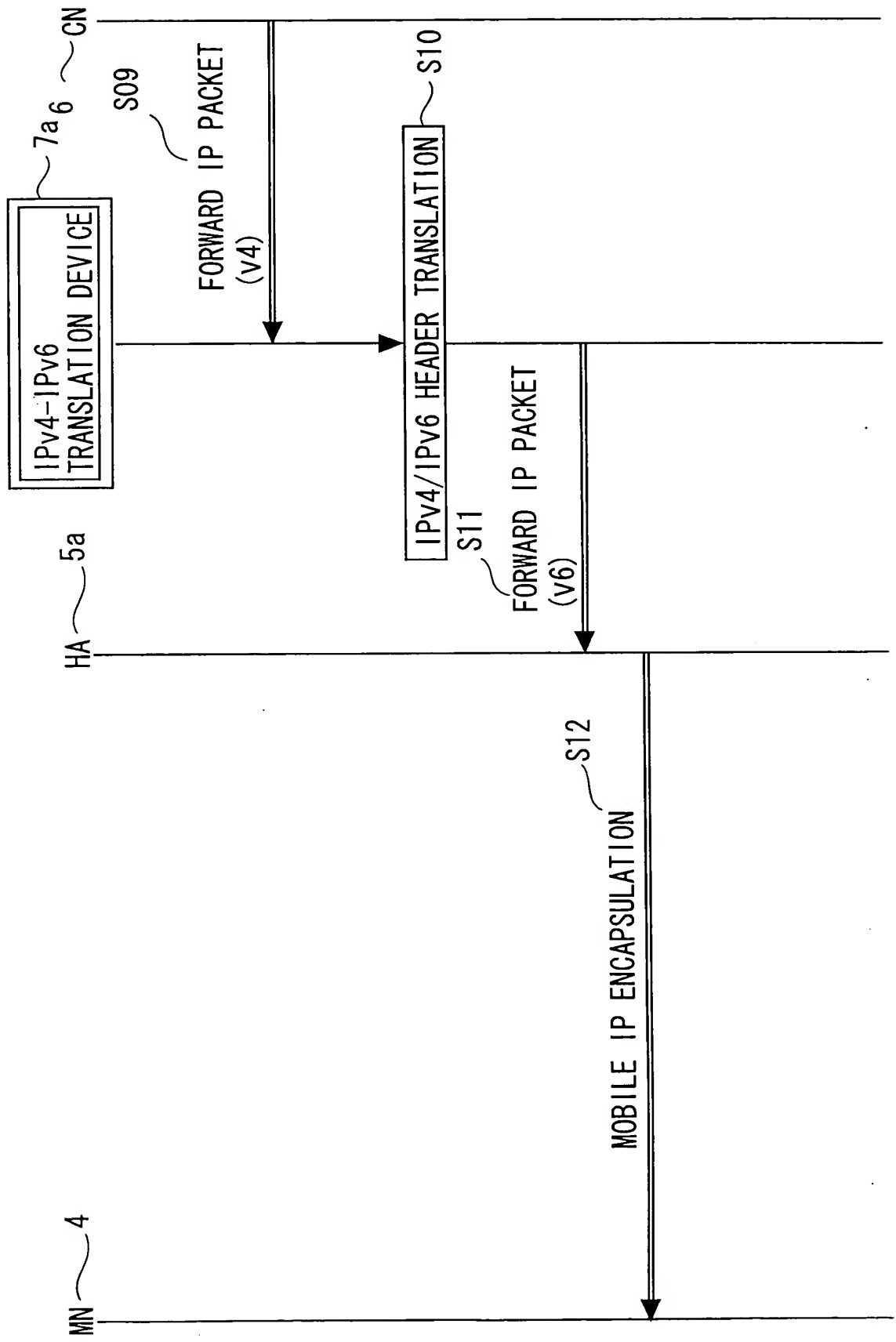


FIG. 6

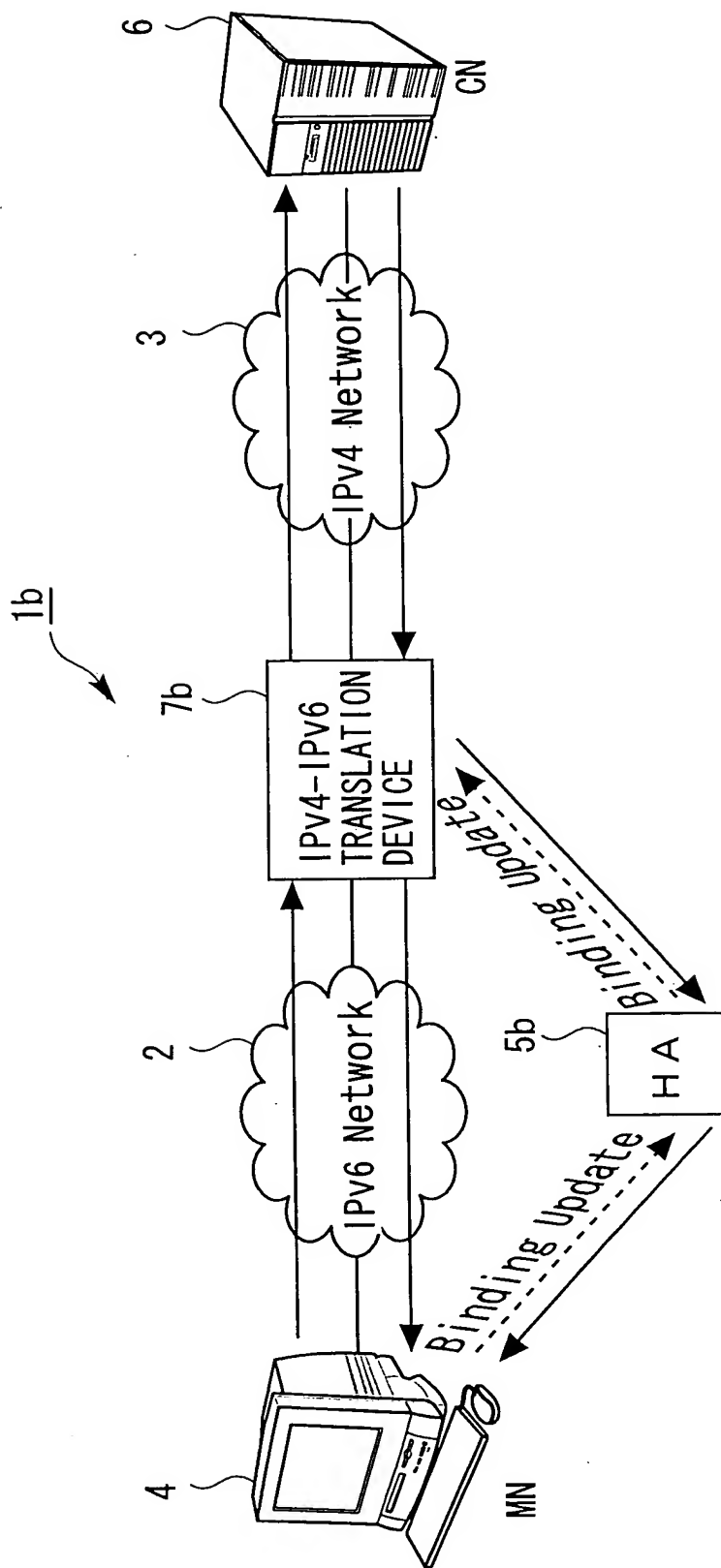


FIG. 7

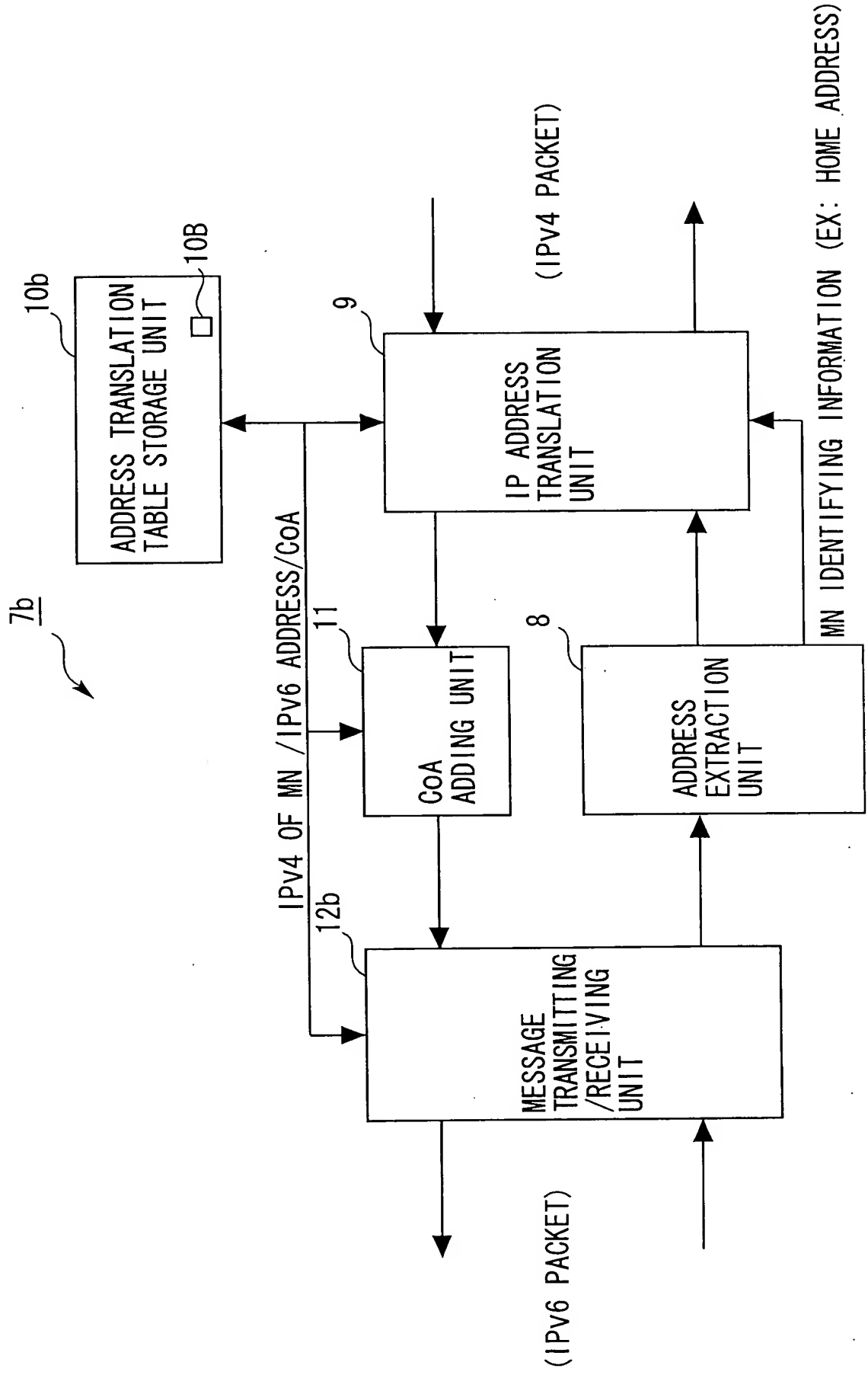


FIG. 8

10B

IPv4	IPv6-HoA	IPv6-CoA
120.130.26.1	FEDC:BA98::7654:3210	1234:5678::7654:3210
120.130.26.2	(unassigned)	(unassigned)
120.130.26.3	(unassigned)	(unassigned)
• • •	• • •	• • •

FIG. 9

Version:6	Traffic Class:0	Flow Label:0	
Payload length:		Next Header:4(IP)	Hop limit:255
SOURCE ADDRESS: ADDRESS OF IPV4-IPV6 TRANSLATION DEVICE			
DESTINATION ADDRESS: COA OF MN			
Version:6	Traffic Class:0	Flow Label:0	
Payload length:		Next Header:	Hop limit:255
SOURCE ADDRESS: ADDRESS OF CN			
DESTINATION ADDRESS: HOME ADDRESS OF MN			
USER DATA			

FIG. 10

Version:6	Traffic Class:0	Flow Label:0	
Payload length:		Next Header:43 (ROUTING HEADER)	Hop limit:255
SOURCE ADDRESS: ADDRESS OF CN			
DESTINATION ADDRESS: COA OF MN			
Next Header:	Header Length:2	Type:2	Segment Left:1
reserved:0			
HOME ADDRESS OF MN			
USER DATA			

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sequenceDiagram
    participant MN as MN
    participant HA as HA
    participant CN as CN
    participant Device as IPv4-IPV6 TRANSLATION DEVICE

    MN->>HA: S01 Binding Update (IPv6)
    HA->>Device: S13 Binding Update (IPv6)
    Device->>Device: S14 IS THERE REGISTRATION OF IPv4 ADDRESS FOR HoA?
    Device->>Device: S15 REGISTER RELATIONSHIP BETWEEN HoA AND CoA
    Device->>HA: S04 EXTRACT HOME ADDRESS (HoA)
    HA->>Device: S05 IS THERE REGISTRATION OF IPv4 ADDRESS FOR HoA?
    Device->>Device: S06 ASSIGN IPv4 ADDRESS
    Device->>HA: S07 IPv6/IPv4 HEADER TRANSLATION
    HA->>CN: S08 FORWARD IP PACKET (v4)
  
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The diagram illustrates the process of IPv4-IPv6 translation. It begins with a Mobile Node (MN) sending a Binding Update (IPv6) (S01) to a Home Agent (HA). The HA then forwards this update to an IPv4-IPV6 TRANSLATION DEVICE (S13). The device checks if there is a registration for the IPv4 address corresponding to the Home Address (HoA) (S14). If not, it registers the relationship between the HoA and the Care-of Address (CoA) (S15). The device then extracts the Home Address (HoA) (S04) and sends it back to the HA. The HA checks if there is a registration for the IPv4 address corresponding to the HoA (S05). If not, it assigns an IPv4 address (S06). The device then performs IPv6/IPv4 header translation (S07) and forwards the resulting IP packet (v4) (S08) to the CN.

FIG. 12

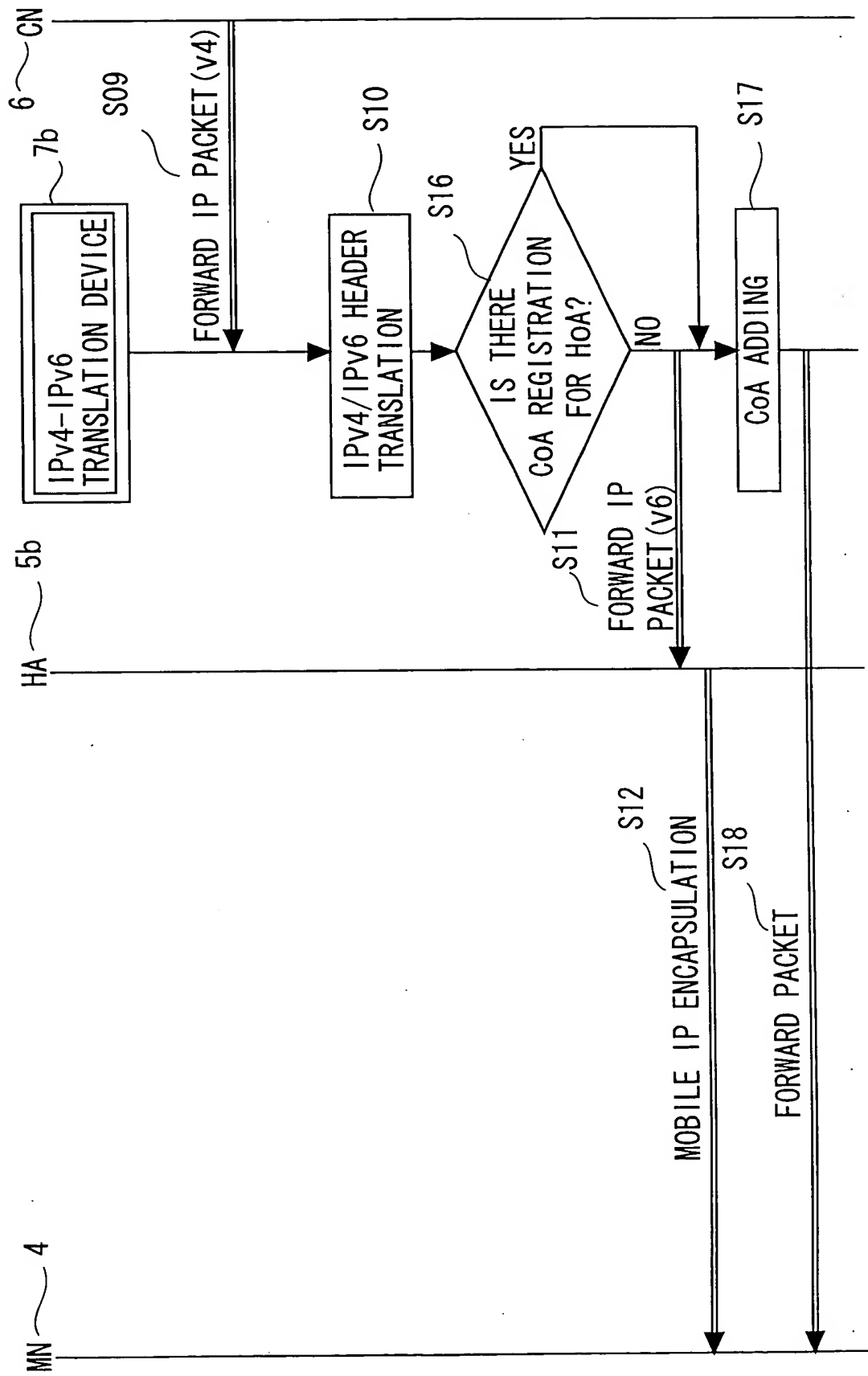


FIG. 13

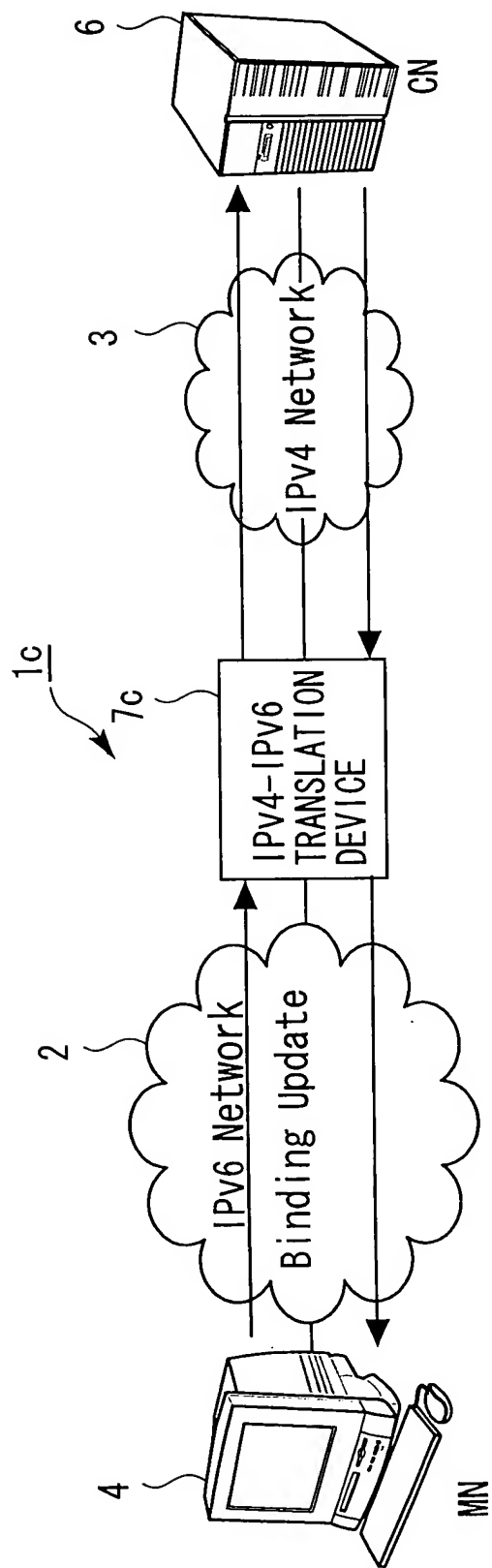


FIG. 14

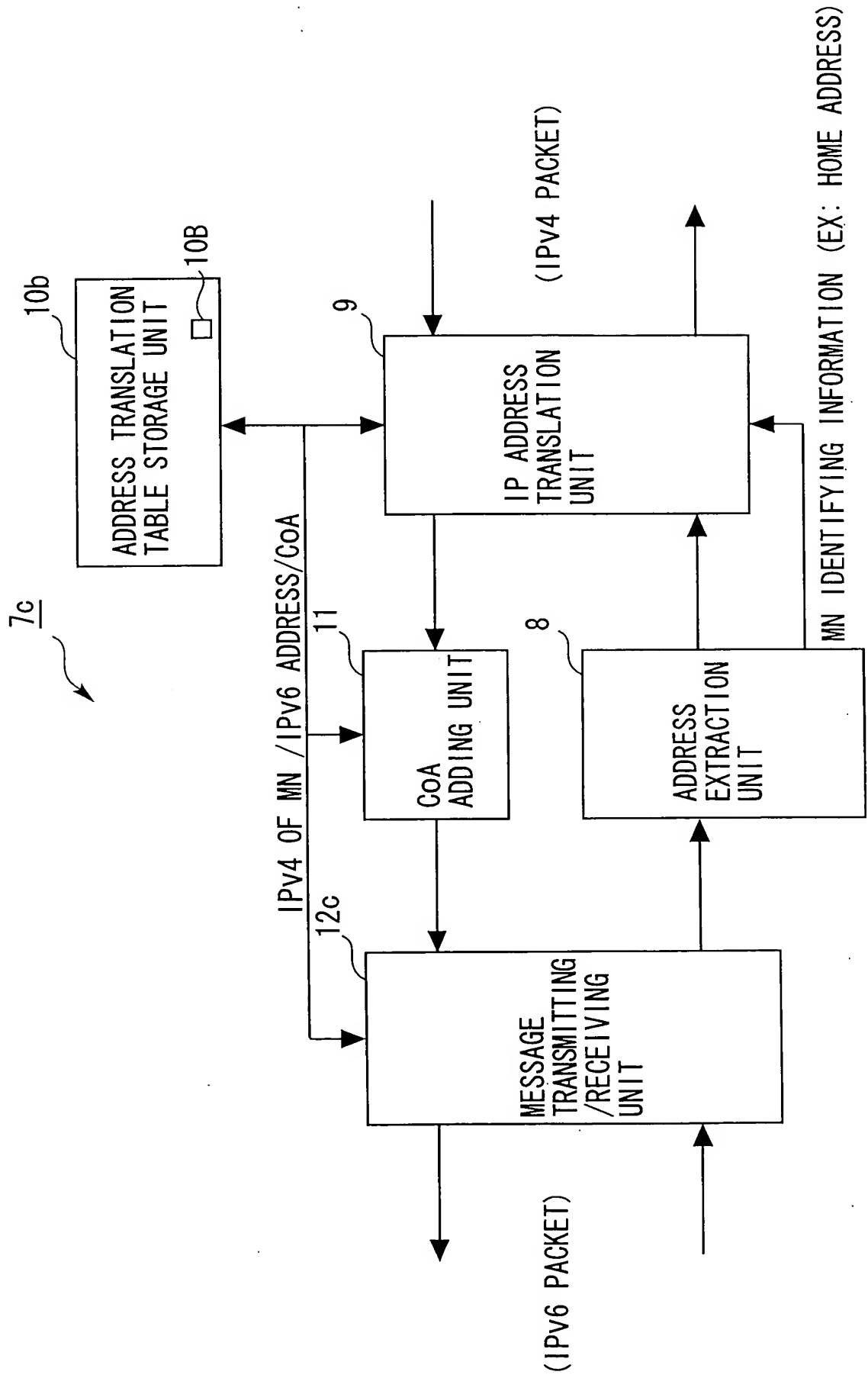


FIG. 15

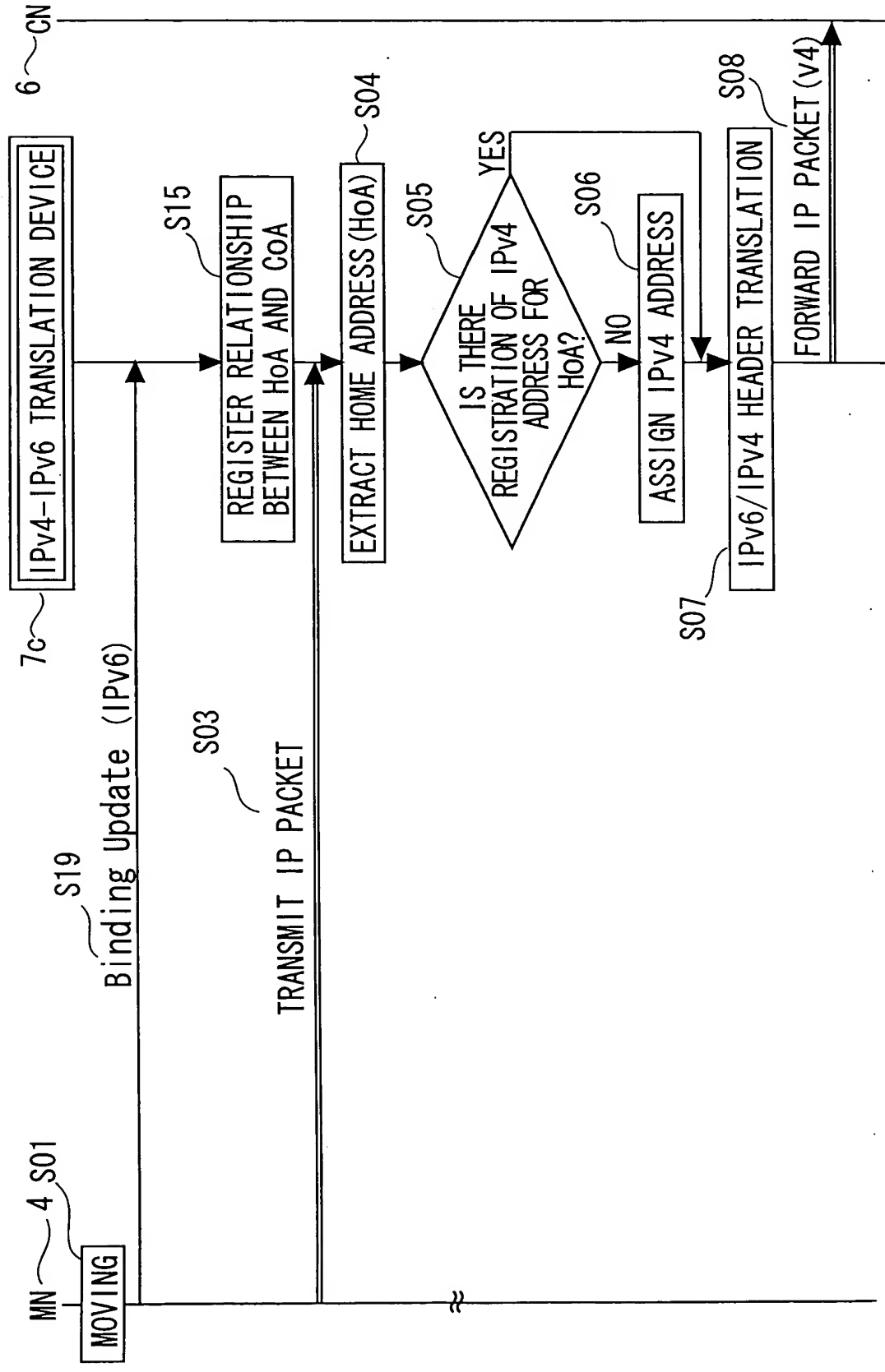


FIG. 16

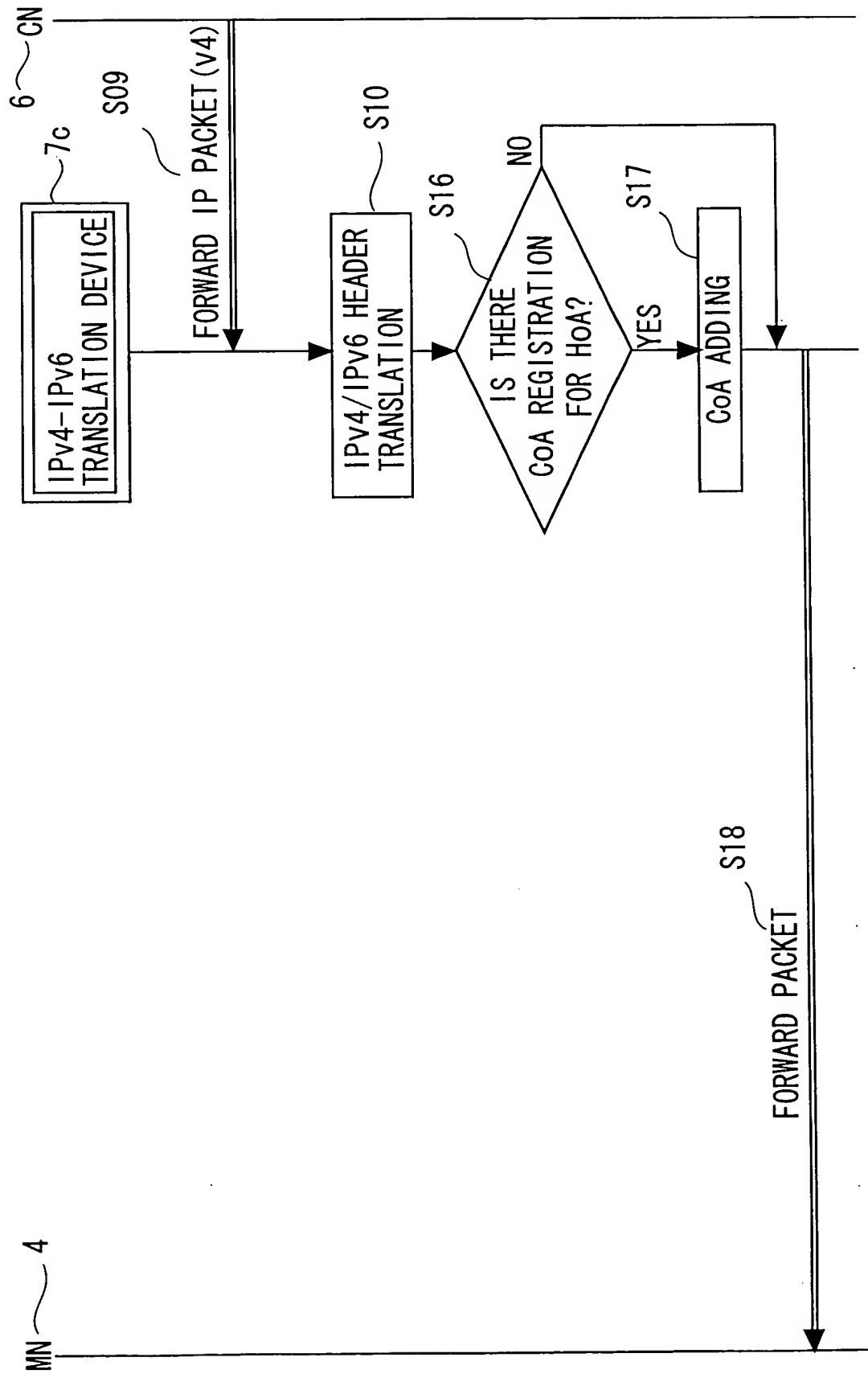


FIG. 17

10B

IPv4	PORT	IPv6-HoA	IPv6-CoA
120.130.26.1	1	FEDC:BA98::7654:3210	1234:5678::7654:3210
120.130.26.2	2	(unassigned)	(unassigned)
120.130.26.3	3	(unassigned)	(unassigned)
• • •	• • •	• • •	• • •

FIG. 18

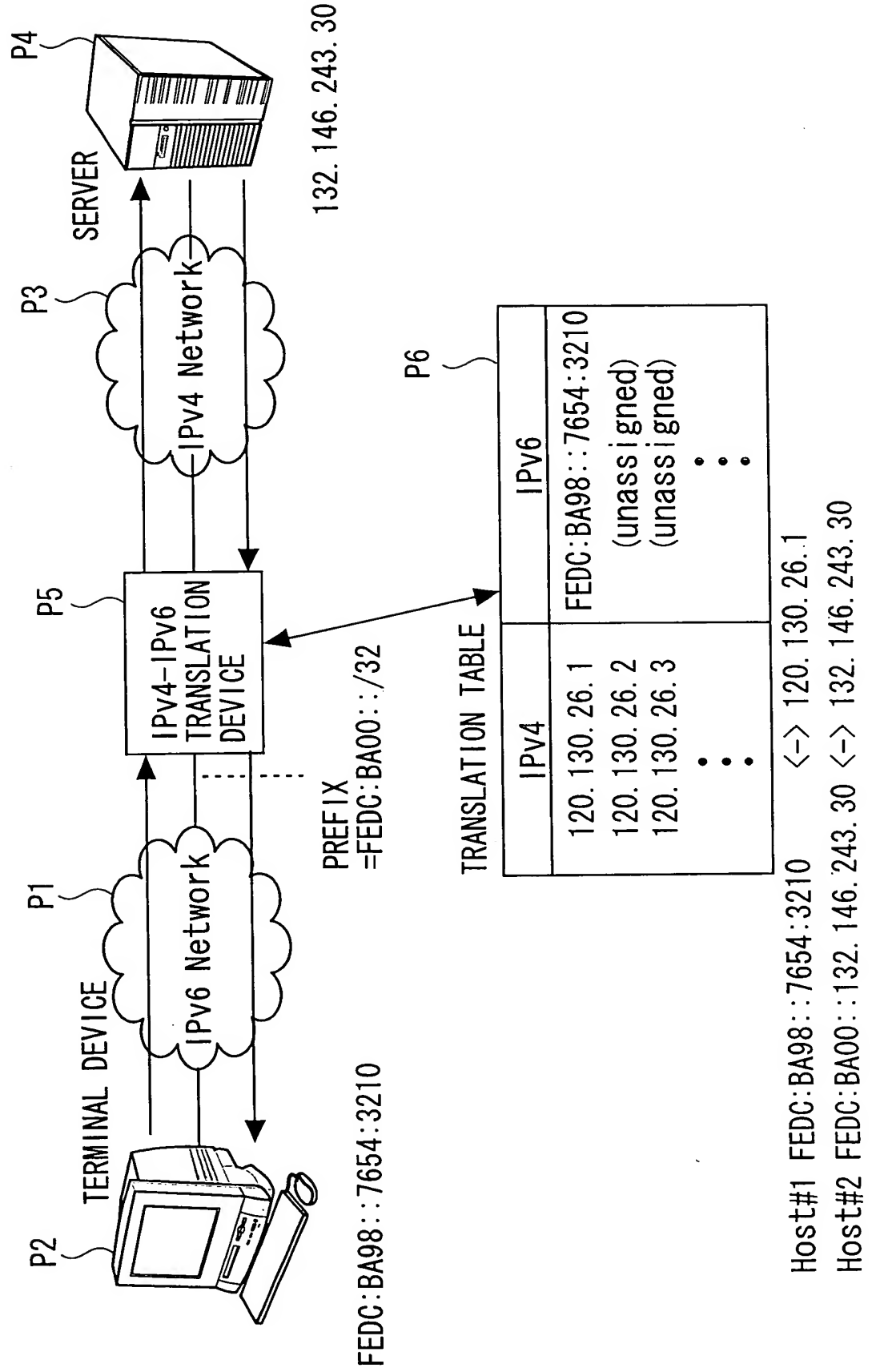


FIG. 19

